

CLAIMS

I/We claim:

- [c1] 1. A method for requesting a service provider to provide services so that the service provider can demonstrate to a service intermediary that it provided services requested by a service consumer, the method comprising:
- registering with the service intermediary an indication of an end code of the service consumer and an identification of the service provider wherein the intermediary provides the end code to the service provider;
- when the service consumer requests the service provider to provide a service, providing by the service consumer to the service provider a code derived from a start code using a function; and
- when the service provider can verify that the end code can be derived from the code provided with a request, providing the requested service to the service consumer
- wherein the service provider can demonstrate to the service intermediary that it provided requested services to the service consumer when the code that was provided with a request can be used to derive the end code.
- [c2] 2. The method of claim 1 wherein the indication of the end code is a start code from which the end code can be derived by the service intermediary.
- [c3] 3. The method of claim 1 wherein the registering include providing a start code and an end code.
- [c4] 4. The method of claim 1 wherein the service intermediary determines whether the end code can be derived from a code provided by a service provider

by requesting the service consumer to provide the corresponding code and when the codes provided by the service provider and the service consumer are the same, determining that the service provider has provided the requested services to the service consumer.

[c5] 5. The method of claim 4 wherein when the codes provided by the service provider and the service consumer are not the same, attempting to derive the end code from the code provided by the service provider and when the attempt is successful, determining that the service provider has provided the requested service to the service consumer.

[c6] 6. The method of claim 5 wherein when the attempt is unsuccessful, attempting to derive the end code from the code provided by the service consumer and when the attempt to derive the end code from the code provided by the service consumer is successful, determining that the service provider has not provided the requested service to the service consumer.

[c7] 7. The method of claim 6 wherein when the attempt to derive the end code from the code provided by the service consumer is unsuccessful, indicating that the codes provided by the server provider and the service consumer cannot be used to determine whether or not the service provider provided the requested services to the service consumer.

[c8] 8. The method of claim 1 wherein the service consumer requests the service provider to provide a service after the last requested service has been provided by the service provider.

[c9] 9. The method of claim 1 wherein the service consumer can limit the number of outstanding requests for services to control exposure to liability for requested services that have not yet been provided.

- [c10] 10. The method of claim 1 wherein the service consumer generates a sequence of codes using a function starting with the start code as input to the function.
- [c11] 11. The method of claim 10 wherein the service consumer provides the codes of the sequence to the service provider in reverse order of generation.
- [c12] 12. The method of claim 1 wherein the service provider verifies that the end code can be derived from a provided code by comparing a previously provided code to the result of applying a function to the provided code.
- [c13] 13. The method of claim 1 wherein the service consumer selects a start code.
- [c14] 14. The method of claim 1 wherein the sequence of codes has a length.
- [c15] 15. The method of claim 14 wherein the length is agreed upon by the service provider and the service consumer.
- [c16] 16. The method of claim 14 wherein the setting of the length of the sequence of codes can be used by the service provider to control exposure for liability for provided services for which payment has not yet been received.
- [c17] 17. The method of claim 14 wherein the service intermediary provides the length to the service provider.
- [c18] 18. The method of claim 1 wherein the service provider registers with the service intermediary an indication of an end code of the service provider and provides the service consumer with a code from which the end code of the service provider can be derived when a service is provided.

[c19] 19. The method of claim 18 wherein a code provided by the service provider to the service consumer can be used in determining whether the service consumer requested services.

[c20] 20. A method for requesting a service provider to provide services so that a service provider can demonstrate it provided services requested by a service consumer, the method comprising:

generating a sequence of codes that includes a start code and an end code using a one-way function;

registering with a service intermediary that the service consumer will request the service provider to provide services by providing a terminal code of the sequence and an identification of the service provider; and

for each service to be requested of the service provider, sending to the service provider a request for the service and a code of the sequence of codes in reverse order of generation so that the service provider can use that code to demonstrate that it provided a requested service.

[c21] 21. The method of claim 20 wherein the service provider receives the end code from the service intermediary and when the service provider receives a request from a service consumer, it verifies whether the end code can be derived from the code of the request.

[c22] 22. The method of claim 21 wherein the service provider provides the requested service only after it can be verified that the end code can be derived from the code of the request.

- [c23] 23. The method of claim 21 wherein the service provider provides to the service intermediary a code provided in a service request to demonstrate that it provided services to the service consumer.
- [c24] 24. The method of claim 20 wherein the service intermediary stores the terminal code and provides the end code to service provider.
- [c25] 25. The method of claim 20 wherein when the service intermediary receives an indication that the service consumer disputes that the service provider provided the service that the service provider alleges it provided, resolving the dispute.
- [c26] 26. The method of claim 25 wherein the service intermediary resolves the dispute in favor of the service provider when the service provider provides a code from which the end code can be derived and the provided code supports the service provider's allegation of the services that were requested.
- [c27] 27. The method of claim 26 wherein the service intermediary determines whether the provided code can be used to derive the end code by comparing the provided code to a corresponding code provided by the service consumer.
- [c28] 28. The method of claim 26 wherein the service intermediary determines whether the provided code can be used to derive the end code by repeatedly applying the function to the provided code.

[c29] 29. A method for providing services requested by a service consumer so that a service provider can demonstrate it provided the requested services, the method comprising:

receiving from a service intermediary an indication that the service consumer has registered to request services of the service consumer and an end code;

receiving requests for services from the service consumer, the requests including a code;

when it can be determined that the end code can be derived from the code included from the request, providing the requested service; and

providing to the service intermediary a code included in a request to demonstrate that the service provider provided requested services to the service consumer.

[c30] 30. The method of claim 29 wherein the service provider determines whether the end code can be derived from a code included in a request by apply a function to the code included in the request.

[c31] 31. The method of claim 30 wherein the function is one way.

[c32] 32. The method of claim 30 wherein a code generated by applying the function is compared to a code previously sent by the service consumer.

[c33] 33. The method of claim 32 wherein the code previously sent is the last code received from the service consumer.

[c34] 34. A computer system for requesting a service provider to provide services, comprising:

a component that generates a sequence of codes that includes a start code and an end code using a one-way function;

a component that registers with a service intermediary that a service consumer will request the service provider to provide services, the registering including providing to the service intermediary a terminal code of the sequence and an identification of the service provider; and

a component that sends to the service provider requests for services and a code of the sequence of codes in reverse order of generation so that the service provider can use the codes to demonstrate that the service consumer requested services.

[c35] 35. The computer system of claim 34 wherein the codes are sent starting with the penultimate code of the sequence.

[c36] 36. The computer system of claim 34 wherein the service provider receives the end code from the service intermediary and when the service provider receives a request from a service consumer, it verifies whether the end code can be derived from the code of the request.

[c37] 37. The computer system of claim 36 wherein the service provider provides the requested service only after it can be verified that the end code can be derived from the code of the request.

[c38] 38. The computer system of claim 36 wherein the service provider provides to the service intermediary a code provided in a service request to demonstrate that the service consumer requested a service.

[c39] 39. The computer system of claim 34 wherein the service intermediary stores the terminal code and provides an end code to service provider.

[c40] 40. The computer system of claim 34 wherein when the service intermediary receives an indication that the service consumer disputes that the service provider provided the service that the service provider alleges it provided, the service intermediary resolves the dispute.

[c41] 41. The computer system of claim 40 wherein the service intermediary resolves the dispute in favor of the service provider when the service provider provides a code from which the end code can be derived and the provided code supports the service provider's allegation of the services that were provided.

[c42] 42. The computer system of claim 41 wherein the service intermediary determines whether the provided code can be used to derive the end code by comparing the provided code to a corresponding code provided by the service consumer.

[c43] 43. The computer system of claim 41 wherein the service intermediary determines whether the provided code can be used to derive the end code by repeatedly applying the function to the provided code.